REMARKS

Claims 1 and 5 are amended herein. Support for the amendment to Claim 1 is found in the specification, for example, at page 2, line 14, through page 3, line 7. Support for the amendment to Claim 5 is found in the specification, for example, at page 4, lines 14-15. Accordingly, the amendments to the claims do not add new matter.

New Claims 6-8 are added. Support for new Claim 6 is found in the specification, for example, at page 6, lines 12-23. Support for new Claim 7 is found in the specification, for example, at page 11, lines 17-21. Support for new Claim 8 is found in the specification, for example, at page 2, lines 8-13. Accordingly, the new claims do not add new matter.

Claim 4 is canceled herein without prejudice to, or disclaimer of, the subject matter contained therein. Applicants maintain that the cancellation of a claim makes no admission as to its patentability and reserve the right to pursue the subject matter of the canceled claim in this or any other patent application.

Upon entry of the amendments, Claims 1-3 and 5-8 are pending.

Rejection of the Claims under 35 U.S.C. §101

Claims 1-5 are rejected under 35 U.S.C. §101 as being directed to non-statutory subject matter. The Office Action states that the Claims 1-4 are not patentable because they do not recite an apparatus that accomplishes method steps, nor do they recite an article or material being transformed by the method. The Office Action states that Claim 5 is not patentable because it is drawn to software *per se*, and does not indicate that the software is embodied in a physical medium.

Claim 1, as amended, is directed to a production scheduling management method, comprising making a computer execute a variety of steps. As such, Claim 1, as amended, recites an apparatus - a computer - that executes the steps of the claimed method. Accordingly, amended Claim 1 recites an apparatus that accomplishes the method steps. Therefore, amended Claim 1 is directed to patentable subject matter.

Claim 5, as amended, is directed to a production scheduling management software program installed in a computer. As such, Claim 5, as amended, recites a physical medium - a

computer – in which the software is present. Accordingly, amended Claim 5 recites software in a physical medium. Therefore, amended Claim 5 is directed to patentable subject matter.

In view of the claim amendments and foregoing remarks, Applicants respectfully request removal of this ground for rejection of the claims.

Rejection of the Claims under 35 U.S.C. §103

Claims 1-5 are rejected under 35 U.S.C. §103 as being obvious over Aoki (US 5,325,304) in view of Seth (US 7,065,499). The Office Action states that Aoki teaches all steps of the claimed method, including producing more than one product in sequence, but fails to teach receiving information of prospect orders, and Seth teaches determining promised delivery dates based on customer orders and forecasted orders.

Applicants submit that the claims are non-obvious over the references because no combination of the reference teaches a production pattern that describes a sequence of production of a plurality of products, and is set in such a manner that a production scheduling is repeated periodically and that the compliance rate of delivery date of a target product becomes a maximum, as recited in currently amended Claims 1 and 5.

Aoki teaches inputting and storing order information; determining product in stock, under manufacture, and to be produced; calculating latest production starting date based on a standard production period of previous orders in order to meet delivery date; and allocating production according to starting date. *Aoki* at column 5, lines 8-41. However, Aoki only teaches attempting to calculate a production starting date of a single product in order to comply with the delivery date. Aoki teaches that if delivery date compliance is not possible, production is simply scheduled to the nearest production vacancy date. *Aoki* at column 5, line 42 to column 6, line 8. Aoki provides no consideration of production scheduling for a plurality of products. Thus, Aoki provides no guidance as to how production scheduling of one product would influence the production date and/or delivery date of another product. Furthermore, there is no mention in Aoki of periodic repeating of production scheduling of a plurality of products. As such, these elements of Claims 1 and 5 are missing from Aoki.

The Office Action points to column 5, lines 50-61 of Aoki as "specifically indicat[ing] more than one product is being produced and each product is scheduled in sequence (first process

producing two apparatuses is scheduled so that it takes place prior to second process producing one apparatus)." *Office Action* at page 5. Column 5, lines 50-61 of Aoki states:

> In the aforementioned example, as the latest feeding date in the first process is Nov. 9, 1990, a vacancy prior to Nov. 9, 1990 where the load for a lot (4 hr) is unoccupied in the producing apparatuses in the first process (DAO1, two apparatuses) is found out. If a vacancy is present, the load of the order is allocated there. Supposing, for example, that Nov. 5, 1990 is allocated, next, a vacancy where the load is unoccupied in the producing apparatus in the second process (DAO2, one apparatus) is searched between the date of Nov. 5, 1990 and the latest feeding date of the second process.

Applicants submit that the above text of Aoki does not teach producing two different products because the phrase "producing apparatus" of Aoki does not refer to the process of producing an apparatus, but instead refers to an apparatus that performs the production. This is clear from an earlier paragraph at column 5, lines 12-31, which includes the statement:

> It is judged whether or not the products can be supplemented through comparison of the read-out state with the quantity of products required by the order, and the necessary number of products to be fed to the producing apparatuses of respective processes, is calculated (step 3). (emphasis added)

When the phrase "producing apparatus" is properly defined, it is clear that Column 5, lines 50-61 of Aoki refers to the use of several apparatuses to perform different steps in the production of a single product, and not to the production of two different products. In particular, this section refers to two DAO1 producing apparatuses performing a first step, and on DAO2 producing apparatus performing a second step, in the production of a single product. Accordingly, Column 5, lines 50-61 of Aoki does not teach producing two different products, but instead teaches two steps in the production of one product. As such, Applicants maintain that Aoki only teaches attempting to calculate a production starting date of a single product in order to comply with the delivery date, and Aoki provides no guidance as to how production scheduling of one product would influence the production date and/or delivery date of another product.

Notwithstanding the above, even if Aoki taught calculating production for a plurality of products, nothing in Aoki teaches production scheduling being repeated periodically. That is, nothing in Aoki teaches the coordination of the sequence of production of a plurality of products. Aoki's focus is only directed to optimizing delivery date compliance of a single product, and

Aoki provides no teaching on coordination of production of a plurality of products in order to optimize delivery dates of the plurality of products. In contrast, Applicants have provided a method that permits those skilled in the art to optimize delivery dates of the plurality of products by, *inter alia*, establishing a production scheduling that is repeated periodically such that the compliance rate of delivery date of a target product becomes a maximum. Such is not taught in Aoki. Accordingly, this element of the claims is distinguishing over Aoki.

These considerations are also missing from Seth. Seth teaches a product matching engine that may consider buyer-committed orders and forecasted orders. However, Seth does not teach production scheduling for one product, much less for a plurality of products. As such, no combination of Seth with Aoki teaches all elements of that which Applicants claim because no combination of the references teaches sequence of production of a plurality of products or production scheduling that is repeated periodically, as presently claimed. Accordingly, Seth, alone or combined with Aoki, cannot render the claims obvious.

In view of the foregoing, Applicants submit that the claims are non-obvious over the cited references, and respectfully request removal of this rejection of the claims.

Claim 7 is further Non-Obvious over the Cited References

Claim 7 is directed to the production scheduling management method of Claim 1, wherein the sequence of production is set to reduce the number and hours of step replacement. As Applicants have taught, when a plurality of products is produced using common equipment, step replacement down time as a result of changing from a first product to a second product can reduce the overall efficiency of product formation. Coordination of the sequence of production of the plurality of products can minimize the step replacement down time, which improves efficiency and increases the ability to optimize delivery date compliance. Thus, when the sequence of production is set to reduce the number and hours of step replacement, delivery date compliance can be improved. No combination of Aoki or Seth teaches such coordination of production of a plurality of products so as to improve delivery date compliance. As discussed above, the cited references teach only delivery date optimization of a single product. Thus, no combination of the references would lead to developing a sequence of production that is set to reduce the number and hours of step replacement when a plurality of products is formed. As

such, no combination of the references teaches all elements of Claim 7. Accordingly, Claim 7 is further non-obvious over the claims.

Claim 8 is further Non-Obvious over the Cited References

Claim 8 is directed to the production scheduling management method of Claim 1, wherein the production scheduling sets the production frame size to maximize delivery compliance for the plurality of products. As Applicants have taught, modification of the frame size for production of one or more of the plurality of products can permit reallocation of manufacturing resources, such as manufacturing equipment, in order to improve delivery compliance for the plurality of products. No combination of Aoki or Seth teaches such modification of the frame size so as to improve delivery date compliance for a plurality of products. As discussed above, the cited references teach only delivery date optimization of a single product. Thus, no combination of the references would lead to modification of the frame size in order to maximize delivery compliance for the plurality of products. As such, no combination of the references teaches all elements of Claim 8. Accordingly, Claim 8 is further non-obvious over the claims.

No Disclaimers or Disavowals

Although the present communication includes alterations to the claims, and characterizations of claim scope or referenced art, the Applicants are not conceding in this application that previously pending claims are not patentable over the cited references. Rather, any alterations or characterizations are being made to facilitate expeditious prosecution of this application. The Applicants reserve the right to pursue at a later date any previously pending or other broader or narrower claims that capture any subject matter supported by the present disclosure, including subject matter found to be specifically disclaimed herein or by any prior prosecution. Accordingly, reviewers of this or any parent, child or related prosecution history shall not reasonably infer that the Applicants have made any disclaimers or disavowals of any subject matter supported by the present application.

CONCLUSION

In view of the above, Applicants respectfully maintain that claims are patentable and request that they be passed to issue. Applicants invite the Examiner to call the undersigned if any remaining issues might be resolved by telephone.

Please charge any additional fees, including any fees for additional extension of time, or credit overpayment to Deposit Account No. 11-1410.

Respectfully submitted,

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